

USSR

UDC 669.293.5.296.537.312.62.539.374

SAVITSKIY, Ye. M., BARON, V. V., FROLOV, V. A., STARKOV, V. N., KORCHAGIN, P. A.
ARKUSHA, T. I., OSIPOV, V. N., SERDYUKOV, Yu. A.

"Cathode-Ray Melting and Deformation of Superconducting Niobium-Zirconium Alloys
Under Industrial Conditions"

Probl. Sverkhprovodyashch. Materialov [Problems of Superconducting Materials --
Collection of Works], Moscow, Nauka Press, 1970, pp.187-192. (Translated from
Referativnyy Zhurnal Metallurgiya, No. 5, 1971, Abstract No. 5 I785 by the
authors).

Translation: Industrial modes of melting ingots 90 mm in diameter and weighing
up to 45 kg in a cathode ray furnace by the method of double vacuum remelting, and
modes of hot pressing of ingots into bars 50 mm in diameter and forging of
pressed bars to 18-22 mm in diameter are developed for alloys of Nb with Zr.
Bars produced by cathode ray melting, hot pressing, and forging are used to pro-
duce wire 0.2 mm in diameter, the mechanical and superconducting properties of
which are measured. 2 figs; 16 biblio refs.

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USSR

UDC: 537.312.62

SAVITSKIY, Ye. M., BARON, V. V., FROLOV, V. A., STARKOV, V. N., KORCHAGIN,
P. A., ARKUSHA, T. I., OSIPOV, V. N., SERDYUKOV, Yu. A.

"Electron-Beam Melting and Deformation of Superconducting Niobium-Zirconium Alloys Under Industrial Conditions"

V sb. Probl. sverkhprovodnykh materialov (Problems of Superconducting Materials--collection of works), Moscow, "Nauka", 1970, pp 187-192 (from RZh-Radiotekhnika, No 5, May 71, Abstract No 5D554)

Translation: Cycles for smelting ingots 90 mm in diameter weighing up to 45 kg in an electron-beam furnace by the method of double vacuum remelting, and schedules for hot-pressing the ingots into bars 50 mm in diameter and for forging the pressed bars to a diameter of 18-20 mm are worked out under industrial conditions for niobium-zirconium alloys. Wire 0.2 mm in diameter is made from the bars produced by the methods of electron-beam melting, hot-pressing and forging, and the mechanical and superconducting properties of this wire are measured. Two illustrations, bibliography of sixteen titles. Resumé.

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USSR

UDC 669.018.4.537.312.62

SAVITSKIY, Ye. M., BARON, V. V., FROLOV, V. A., STARKOV, V. N., KORCHAGIN, P. A., ARKUSHA, T. I., OSIPOV, V. N., and SERDYUKOV, Yu. A.

"Cathode Ray Melting and Deformation of Superconducting Niobium-Zirconium Alloys Under Industrial Conditions"

Problemy Sverkhprovodyashchikh Materialov [Problem of Superconducting Materials — Collection of Works], Moscow, Nauka Press, 1970, pp 187-192

Translation: Modes for production of ingots 90 mm in diameter weighing up to 45 kg in a cathode ray furnace by double vacuum remelting, and modes of hot pressing of ingots into bars 50 mm in diameter and forging of the pressed bars to diameters of 18-20 mm have been developed under industrial conditions for alloys of niobium with zirconium. Wire 0.2 mm in diameter has been produced from the bars manufactured by cathode ray melting, hot pressing, and forging; the mechanical and superconducting properties of the wires are measured.

2 figures, 16 biblio. refs.

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USSR

UDC 615.332 (Cycloserinum). 014.453

SAZYKIN, Yu. O., CHAYKOVSKAYA, S. M., KORCHAGIN, V. B., PANINA, M. A.,
IVANOVA, V. N., BALITSKIY, V. A., and VAYNER, Ye. A., All-Union Scientific
Research Institute of Antibiotics and Institute of Biophysics, Ministry of
Health USSR

"Sterilization of Oxacillin Preparations With Fast Electrons"

Moscow, Antibiotiki, No 10, 1971, pp 933-936

Abstract: Exposure of preparations of the sodium salt of oxacillin in 0.5 g
vials to fast electrons (10 Mev) in a linear accelerator at a dose of 2.5
Mrad resulted in complete sterility of the antibiotic, whereas, tests of
control (nonirradiated) vials revealed contamination in every second or
third vial. The induced radioactivity of the samples did not exceed $3.7 \cdot 10^{-10}$
curie even with minimum length of exposure. The procedure had no effect on
the antibiotic activity, pharmacological activity (no evidence of toxicity
or pyrogenicity) or physicochemical properties of the preparations.

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KORCHAGIN, V. P.

ECON

TRAINING OF HIGHLY SKILLED SPECIALIZED MANPOWER

Article by V. P. Korchagin, "Problems of Development of Higher Schools and Universities," Higher Education in the USSR, Vol. 2, No. 1, 1975, pp. 1-11.

The following article deals with the quantitative growth and the of the interrelationship between economic growth and the increased, natural-technological level of training of the working power. Attention is drawn to the need for a more profound study of the development of the system of higher education in the USSR. An analysis is made of the various problems in the development of the system of higher education, particularly in the field of training of highly skilled specialists. The author discusses the need for a more profound study of the development of the system of higher education, particularly in the field of training of highly skilled specialists. The author discusses the need for a more profound study of the development of the system of higher education, particularly in the field of training of highly skilled specialists.

The 24th CPSU Congress set the important development task of "developing higher and secondary specialized education in accordance with the requirements of scientific and technical progress and improving the quality of training, and improving the ideological-political education of the future specialists." The implementation of this task calls for a study of the economic problems of education and for improving the planning of cadre training.

The problems of cadre education and training are among the key, the economic problems. The development of the economy and the upgrading of the scientific and technical level of development of all economic sectors calls for a more profound study of the system of higher education in the USSR. Attention is drawn to the need for a more profound study of the development of the system of higher education, particularly in the field of training of highly skilled specialists. The author discusses the need for a more profound study of the development of the system of higher education, particularly in the field of training of highly skilled specialists.

USSR

K UDC 538.56.01+621.38.029.64

VOROBEYCHIKOV, E. S., KIREYEV, A. M., KORCHAGIN, YU. A., POYZNER, B. N.

"Non-Autonomic Operation of a Reflex Klystron"

Kiev, Izvestiya VUZ -- Radioelektronika, Vol 13, No 8, 1970, pp 923-933

Abstract: The object of this paper is to demonstrate the merit of proving that multifrequency uhf oscillators are possible, comparing them with lasers, and explaining the characteristics of their non-autonomic operation. The authors begin by considering a device consisting of a reflex klystron connected to a waveguide line, and obtain the equations for the amplitudes and frequencies of the oscillations produced by the device. Since the equations they derive are of the same form as those of the gas laser, there is a definite analogy between multifrequency oscillation systems in the optical and uhf ranges. A table is presented listing the comparative aspects of the klystron and the helium-neon laser. The non-autonomous operation of the klystron is investigated by generalizing the known results of laser analysis, and an experiment for checking the findings of this investigation is described. The results of the experiment agree closely with the results obtained from theory.

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USSR

K
UDC 538.56.01:621.38.029.64

VOROBAYCHIKOV, E. S., KORCHAGIN, Yu. A., POYZNER, B. N.

"The Behavior of a Multifrequency Klystron Generator Under the Action of a Small Superhigh-Frequency Signal"

Izvestiya Vysshikh Uchebnykh Zavedeniy Fizika, No 6, 1970, pp 44-48

Abstract: A study is made of the operation of a multifrequency generator: namely, a reflex klystron, coupled to a wave-guide line. Its behavior is described by a system of second-order equations for voltages, the right-hand part of which is determined by induced current which is a nonlinear function of the sum of voltages of many frequencies at the electronic gap. The solution of these equations results in equations which coincide in structure with the equations of a gas laser. The conclusions concerning the spectrum transformation of a multifrequency klystron under the action of an external signal are qualitatively confirmed by experiment.

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1/2 020 UNCLASSIFIED PROCESSING DATE--27NOV70
TITLE--RELATIVE MIGRATION TENDENCIES OF P SUBSTITUTED PHENYL GROUPS IN
CARBONIUM ION DOUBLY DEGENERATE REARRANGEMENTS -U-
AUTHOR--(05)-SHUBIN, V.G., KORCHAGINA, D.V., BORODKIN, G.I., DERENDYAEV,
B.G., KOPTYUG, V.A.
COUNTRY OF INFO--USSR
SOURCE--J. CHEM. SOC. D 1970, (11), 696-7
DATE PUBLISHED-----70
SUBJECT AREAS--CHEMISTRY
TOPIC TAGS--BENZENE DERIVATIVE, NUCLEAR MAGNETIC RESONANCE, UV SPECTRUM,
FLUORINATED ORGANIC COMPOUND, CHLORINATED ORGANIC COMPOUND
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAE--3007/0989 STEP NO--UK/0000/70/000/011/0696/0697
CIRC ACCESSION NO--AP0136419
UNCLASSIFIED

ABSTRACT/EXTRACT: 107 OF 107
P, X, PHENYL GROUPS IN THE DOUBLY DEGENERATE REARRANGEMENT OF STABLE (II)
IONS, FORMED BY PROTONATION OF NEUTRAL PRECURSORS, IS χ EQUALS ME LARGER
THAN F SIMILAR TO H LARGER THAN CL LARGER THAN CF PRIME3. THE NMR AND
UV SPECTRA OF I ARE DISCUSSED. FACILITY: INST. ORG. CHEM.,
NOVOSIBIRSK, USSR.

UNCLASSIFIED

Acc. Nr.: AP0029329

Ref. Code: UR 0240

PRIMARY SOURCE: Gigiyena i Sanitariya, 1970, Nr 1, pp 32-36

REMOVAL OF CERTAIN ENTERIC VIRUSES AND BACTERIA
FROM SEWAGE IN A CIRCULATION OXIDIZING CHANNEL

Goncharuk, Ye.I.; Grigor'yeva, L.B.; Bey, T.V.;
Shulyak, E.V., Shulyak, E.V.; Korchak, G.I.

Investigations have shown the treatment of sewage in a circulation oxidizing channel for two days to be a highly efficient means of decontamination judging by chemical indices. The sewage proved to be free of Coxsackie B5 and ECHO 19 viruses in 24 and 48 hours consecutively and that of Esch. coli bacteriophage in 12 hours in the initial concentration amounting 50 PFU/ml and in 16 hours, when it amounted to 6000-7000 PFU/ml. The pathogenic serotypes of B. coli in a mixture of sewage and active slime were recovered for a period of 3-7 days in the initial contamination equaling 1 million a litre and for 15-18 days if it amounted to 100 million a litre. The Coxsackie B5 virus was recovered from active slime up to the third day and ECHO 19 virus - up to the 5th day. The Esch. coli bacteriophage was present for 15 to 25 days depending on the initial concentration. Disinfection of treated sewages is considered to be an obligatory measure.

REEL/FRAME

USSR

UDC 577.1:615/7.9

KORCHAK, L. I., Editorial Staff of the Journal "Radiobiologiya," Academy of Sciences of the USSR

"Effect of Anoxia and Some Radiation Protectors on the Content of Non-Protein (Acid-Soluble) Sulfhydryl Groups in the Spleen of Mice"

Vliyaniye anoksii nekotorykh radioprotektorov na sodержaniye nebelkovykh (kislotorastvorimykh) sul'fidril'nykh grupp v селезенке мышей (cf. English above), Moscow, 1970, 14 pp, bibliography of 31 titles, No 2040-70 Dep. (from RZh-Biologicheskaya Khimiya, No 3, 10 Mar 71, Abstract No 5F2075 Dep.)

Translation: An investigation was made of the content of non-protein acid-soluble SH groups in the tissue of mouse spleen under the effect of anoxia and of various chemical radiation protectors with different pharmacological action. In the case of action of 25 mg of radiation protectors containing SH groups (cystamine, cysteine, unithiol) there was an increase in the content of non-protein tissue thiol groups in the immediate period after the agents took effect. In the case of substances potentially containing SH groups, cystamine was the only agent which increased the concentration of SH groups. The introduction of aminoethylisothiuronium did not change the content of non-protein thiol groups. The radioprotective effectiveness of

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USSR

KORCHAK, L. I., Vliyanie anoksi i nekotorykh radioprotektorov na soderniye nebelkovykh (kislotorastvorimykh) sul'fgidril'nykh grupp v selezenke myshey (cf. English above), Moscow, 1970, 14 pp, bibliography of 31 titles, No 2040-70 Dep. (from RZh-Biologicheskaya Khimiya, No 3, 10 Mar 71, Abstract No 5F2075 Dep.)

anoxia and substances with shielding properties against ionizing radiation by creating tissue hypoxia (serotonin, 5-methoxytryptamine, morphine, heroin, adrenaline, NaNO_2) is unrelated to the change in concentration of non-protein thiols. Author's abstract.

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62

Waveguides

USSR

UDC 621.372.827:621.317.343.2

KOSHELEV, G. P., KORCHEMKIN, Yu. R., and SHAMAYEV, S. I.

"Determination of Critical Wave-Length Constant and Wave Resistance of Coaxial Line Having an Inner Conductor of Tapered Section"

Moscow, Antenny, No 13, 1971, pp 18-27

Abstract: The recent tendency is to use waveguides of complex cross-section. Such waveguides are smaller, lighter and suitable for a wider frequency band than the waveguides of simple (rectangular, round) cross-section).

This article investigates the waveguide having a cylindrical outer conductor and an inner conductor consisting of a rod provided with four longitudinal ribs.

Graphs are presented showing the critical wave-length constants (solid lines) and the wave resistance (dashed lines) for various proportions of the subject waveguide.

Experimental results agree with the theoretical ones essentially within the experimental errors.

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1/2 019 UNCLASSIFIED PROCESSING DATE--18SEP70
TITLE--FAR INFRARED ABSORPTION IN N GERMANIUM CAUSED BY IMPURITY
INTERACTION -U-
AUTHOR--(04)-DEMESHINA, A.I., KORCHAZHKINA, ~~D.L.~~, KUZNETSOVA, N.N., MURZIN,
V.N.
COUNTRY OF INFO--USSR
SOURCE--FIZ. TEKH. POLUPROV. 1970, 4(2), 428-30
DATE PUBLISHED-----70
SUBJECT AREAS--PHYSICS, CHEMISTRY
TOPIC TAGS--IR IRRADIATION, ABSORPTION, GERMANIUM SEMICONDUCTOR,
SPECTROSCOPIC ANALYSIS, PHOSPHORUS, GALLIUM, ELECTRON SHELL
CONTROL MARKING--NO RESTRICTIONS
DOCUMENT CLASS--UNCLASSIFIED
PROXY REEL/FRAHE--1988/0571 STEP NO--UR/0449/70/004/002/0428/0430
CIRC ACCESSION NO--AP0105556
UNCLASSIFIED

2/2 019

UNCLASSIFIED

PROCESSING DATE--18SEP70

CIRC ACCESSION NO--AP0105556

ABSTRACT/EXTRACT--(U) GP-0- ABSTRACT. FAR IR SPECTROSCOPY WAS USED TO STUDY THE INITIAL STAGES OF THE INTERACTION OF FINE DONOR IMPURITIES IN GE AT LOW CONCNS. WHEN THE ELECTRON SHELLS OF ONLY THE CLOSEST IMPURITY ATOMS OVERLAP. SAMPLES OF GE, DOPED WITH P AND COMPENSATED WITH GA HAVING DEGREES OF COMPENSATION 0.05-0.5 WERE USED. THE DATA FOR SAMPLES CONTG. THE SAME CONC. OF P BUT DIFFERENT DEGREES OF COMPENSATION SHOWED GOOD AGREEMENT WITH THEORETICAL RESULTS. FOR SAMPLES WITH COMPENSATION 0.45, WHICH FALLS OUTSIDE THE LIMITS OF APPLICABILITY, THE VALUE OF THE ABSORPTION COEFF. PER UNIT OF COMPENSATION INCREASES AS THE CONC. OF THE DONOR IMPURITY INCREASES IN AGREEMENT WITH THE MAIN CONCLUSIONS OF THE THEORY. THE DIFFERENCE WHICH IS OBSD. IS ATTRIBUTED TO THE POSSIBLE NARROWING OF THE ABSORPTION BAND AND A SHIFT OF ITS MAX. TO SHORTER WAVELENGTHS.

UNCLASSIFIED

USSR

UDC: 519.2

KORCHEMKIN, Yu. I., MEN'SHIKH, B. I.

"Concerning the Problem of Defining the Concept of Probability"

Sb. nauch. tr. Mosk. inzh.-fiz. in-t. vech. otd. (Collected Scientific Works. Moscow Engineering Physics Institute. Night School Division), Chelyabinsk, 1971, pp 42-49 (from RZh-Kibernetika, No 1, Jan 72, Abstract No 1V3)

[No abstract]

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USSR

KORCHEMNAYA, YE. K.

"Moscow Seminar on Analytical Chemistry"

Moscow, Zhurnal Analiticheskoy Khimii, Vol XXV, No 2, Feb 70, p 399

Abstract: Several subjects were covered by reports read at the 9 October 1969 Moscow Seminar on Analytical Chemistry, as follows:

1) The possible effects of the solubility and the deposition of the precipitate (that is, on the indicator electrode) on amperometric readings taken during use of the precipitation method (V. A. ZAKHAROV, Kazakh University, Alma-Ata);

2) The likelihood of the composite nature of xylenol orange and methylthymol blue; the possibility of synthesis of heptamethylthymol blue; new methods for synthesis of methylthymol blue and other phthalein complexes, on the basis of sulfophthaleins; and the use of those compounds in titration and spectrophotometry (A. I. CHERKESOV, N. K. ASTAKHOV, YU. V. PUSHINOV, and V. N. RYZHOV, Saratov Pedagogical Institute).

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USSR

KORCHEMNAYA, YE. K., Zhurnal Analiticheskoy Khimii, Vol XXV, No 2, Feb 70, p 399

3) Principles of the use of quantum mechanics calculations in connection with certain spectrophotometric data in the study of the structure of reagents and their complexes, particularly the hydroxyanthraquinones (L. I. GEN', M. Z. YAMPOL'SKIY and P. D. TYUTYUNNIKOVA, Kursk Pedagogical Institute); and

4) The spectrophotometric study of indium complexes, with use of quantum mechanics calculations (S. N. DROZDOVA, M. Z. YAMPOL'SKIY and L. I. GEN').

A. YE. KLYGIN, B. YE. ZAYTSEV, N. N. BASARGIN, and others participated in the discussions.

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USSR

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KORCHEMNAYA, YE. K.

"Moscow Seminar on Analytical Chemistry"

Moscow, Zhurnal Analiticheskoy Khimii, Vol 25, No 7, Jul 70, p 1434

Abstract: The seminar chaired by V. A. ZARINSKIY was held on the 19 Feb 70; L. YA. ROZINOV from the Gomel Plant for Analytical Instruments reported on new instruments for physico-chemical analysis. M. I. YUDASHKIN gave a practical demonstration of the performance of these instruments.

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USSR

KORCHEMNAYA, YE. YE.

"Moscow Seminar on Analytical Chemistry"

Moscow, Zhurnal Analiticheskoy Khimii, Vol 25, No 5, May 70, p 1031

Abstract: The Moscow seminar on analytical chemistry, devoted to polarographic analytical methods was held on Jan 15, 1970, the meeting being chaired by N. A. FILIPPOV. Z. B. ROZHDESTVENSKA from Kazakh University in Alma-Ata talked about electrolytic oxidation of sulfide minerals, pointing out that secondary anode reactions play an important role in the course of oxidation; the active forms of oxygen and chlorine, forming at the anode, participate in the reaction. G. A. NIKITINA and N. G. CHOVDNYK from the Kuybyshev Aviation Institute studied discharge ionization of tin, cadmium and other metals by the polarographic method with accumulation, against the background of sulfate-chloride alloy, using platinum and tungsten electrodes.

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Acc. Nr.: **AP0029809**

Ref. Code: UR 0475

PRIMARY SOURCE: Vrachebnoye Delo, 1970, Nr 1, pp 43-45

STRUCTURAL CHANGES IN THE SPINAL CORD IN HEMORRHAGIC STROKES
Korchennyy, V. A. (Kiev)

A histological study of the lumbo-sacral segments of the spinal cord in patients dying of acute disturbances of the cerebral blood circulation showed distinct structural changes in the grey matter of the spinal cord.

Individual cells of the anterior and posterior horns were irregularly impregnated and swollen. One also revealed phenomena of cerebral chromatolysis with homogenization of the protoplasm as well as excessive accumulation of lipofuscin.

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REEL/FRAHE

19681495

Acc. Nr: AP0047193

Ref. Code: UR 0511

PRIMARY SOURCE: Stomatologiya, 1970, Vol 49, Nr 1, pp 82-83

Korchemskiy, I. S.; Margulis, Ye. A.

- BRODIE'S ABSCESS OF THE MANDIBULAR

BONE

S u m m a r y. The authors describe a rare localization of Brodie's abscess in the mandibular bone. The paper presents data of cytological and microbiological investigation of the tap matter taken from the infiltrate of the soft tissues.

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REEL/FRAME
19790692

PI 2

USSR

UDC: 621.375

KORCHENENKOVA, V. G., Engineer, KUZENKOV, V.V., Engineer, CHERNYSHEV, R. N.,
Engineer, POLONNIKOV, D. Ye., Doctor of Technical Sciences

"A Low-Current Measurement Amplifier"

Moscow, Pribory i Sistemy Upravleniya, No 4, Apr 72, pp 35-37

Abstract: An amplifier with temperature control is proposed for measuring currents of the order of 10^{-12} - 10^{-14} A with a parametric input stage which appreciably simplifies circuitry, reduces overall dimensions and weight, and thus extends the range of application of these devices. A schematic diagram is presented and the operation of the device is described. The amplifier has a gain of the order of 10^6 with an output of 10 V at 10 mA. Drift is 30 μ V/ $^{\circ}$ C and input impedance is 10^{10} Ω .

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USSR

UDC 620.193.43

CHETVERIKOV, A. V., PAVLENKO, N. A., TYUTYUNIK, O. A., and KORCHINSKAYA, O. A.,
Academy of Sciences UkrSSR, Institute of General and Inorganic Chemistry

"Investigation of the Corrosion Resistance of Nickel in SnCl_2 -KCl Salt Melt"

Moscow, Zashchita Metallov, Vol 9, No 2, Mar-Apr 73, pp 192-194

Abstract: The corrosion resistance of Ni in 80% SnCl_2 -20%KCl-melt was investigated by the weighing method at 300° , in order to obtain data necessary for the production of a semi-industrial unit for electrolytic tin-plating. The contents of metals in the melt, in wt.% after testing, are indicated and the results of corrosion tests of 4-54 hrs duration, conducted on a series of specimens in protective nitrogen atmosphere and without it, are discussed. A considerably higher corrosive pitting took place on specimens without protective atmosphere, the corrosion rate reaching a maximum after four testing hours. The corrosion rate of partially submerged specimens was four times higher than the corrosion rate of completely submerged specimens. In nitrogen atmosphere, the corrosion rate was independent of the degree of submersion. One figure, two tables, eight bibliographic references.

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USSR,

UDC 911.3.616.981.455(574)

KONDRASHKIN, G. A., PUGACHEV, Yu. A., KONDRASHKINA, K. I., KALYAZINA, I. M.,
PROSHIN, V. G., LUK'YANOVA, A. D., KORCHEVSKAYA, V. A., KORCHEVSKIY, P. G.,
and POLYAKOV, V. K.

"Landscape-Epidemiological Regional Division Into Tularemia Districts in the
Trans-Ural Area of Western Kazakhstan"

V sb. Probl. osobo opasn. infektsiy (Problems of Especially Dangerous In-
fections -- collection of works) Byp. 5(15), Saratov, 1970, pp 91-105 (from
RZh-Meditsinskaya Geografiya, No 4, Apr 71, Abstract No 4.36.96)

Translation: The Trans-Ural area of Western Kazakhstan consists of four land-
scape-epidemiological areas: the Barbastau-Ileko-Utvinakiy area (steppe),
the Chelkaro-Ankatinskiy area (dry steppe), the Chiderty-Ulenty-Buldurtinskiy
area (semi-desert), and the Kaldygayty-Uil'skiy area (semi-desert-desert).
Each area is described. Characteristic for the steppe and dry steppe areas
is the steppe type of tularemia focus; while the estuary semi-desert type
of tularemia focus is typical for the semi-desert. The prolonged epizootic
"calm" of tularemia foci in the Trans-Ural area is due to the progressive
drying out of once extensive local river delta floods. Because of cattle
slaughter, xerophyt plants take over with river land turning to desert.

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Mechanical Properties

SSR

KONDRASHKIN, G. A., et al., Probl. osobo opasn. infektsiy (Problems of Especially Dangerous Infections -- collection of works) Vyp. 5 (15), Saratov, 1970, pp 91-105 (from RZh-Meditsinskaya Geografiya, No 4, Apr 71, Abstract No 4.36.96)

The projected irrigation of the Trans-Ural area by construction of the Volga-Ural canal may activate local native tularemia foci. Numerical tables are provided for small mammals and their ectoparasites in the areas defined.

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USSR.

UDC 911.3.616.981.455(574)

KONDRASHKIN, G. A., PUGACHEV, Yu. A., KONDRASHKINA, K. I., KALYAZINA, I. M.,
PROSHIN, V. G., LUK'YANOVA, A. D., KORCHLVS KAYA, V. A., KORCHEVSKIY, P. G.,
and POLYAKOV, V. K.

"Landscape-Epidemiological Regional Division Into Tularemia Districts in the
Trans-Ural Area of Western Kazakhstan"

V sb. Probl. osobo opasn. infektsiy (Problems of Especially Dangerous In-
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Translation: The Trans-Ural area of Western Kazakhstan consists of four land-
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the Chelkaro-Ankatinskiy area (dry steppe), the Chiderty-Ulenty-Buldurtinskiy
area (semi-desert), and the Kaldygayty-Uil'skiy area (semi-desert-desert).
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is the steppe type of tularemia focus; while the estuary semi-desert type
of tularemia focus is typical for the semi-desert. The prolonged epizootic
"calm" of tularemia foci in the Trans-Ural area is due to the progressive
drying out of once extensive local river delta floods. Because of cattle
slaughter, xerophyt plants take over with river land turning to desert.

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Mechanical Properties

SSR

KONDRASHKIN, G. A., et al., Probl. osobo opasn. infektsiy (Problems of Especially Dangerous Infections -- collection of works) Vyp. 5 (15), Saratov, 1970, pp 91-105 (from RZh-Meditsinskaya Geografiya, No 4, Apr 71, Abstract No 4.36.96)

The projected irrigation of the Trans-Ural area by construction of the Volga-Ural canal may activate local native tularemia foci. Numerical tables are provided for small mammals and their ectoparasites in the areas defined.

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USSR

UDC 699.841

KORCHINSKIY, I. L., Doctor of Technical Sciences, Professor, and GRILL', A. A.,
Candidate of Technical Sciences

"Calculation of Suspended Roofs for Seismic Effects"

Moscow, Beton i Zhelezobeton, No 6, June 1972, pp 41-44

Abstract: Vibrations of some types of suspended roofing, brought about by seismic action, are dealt with. The problem takes the length of the buildings into account; in connection with this, account is taken of the possibility of movement of the supporting contour of the roof in different phases with respect to time. This circumstance disclosed the fact that the customarily employed calculation procedure does not include in its scope the most essential forms of seismic action. It was concluded that when suspended roofs are designed for seismic effects, various positions of the seismic wave with respect to the structure and the most dangerous cases of roof loading by inertial forces must be considered. A formula, developed on the basis of experimental data, is provided for calculating the value of the dynamic coefficient. 3 figures. 3 references.

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USSR

UDC: 621.382.382.323-416

KORCHKOV, V. P. and SUKHAREV, Yu. G.

"Thin-Film Field Effect Transistor with Insulated ZnTe Gate"

Moscow, Radiotekhnika i Elektronika, Vol. 15, No. 3, 1970, pp 636-639

Abstract: Since transistors using p-tellurium and indium antimonide have the defect that their high electrical conductivity requires exceedingly thin films, there has been a good deal of interest in film field-effect transistors using new p-type semiconductors. The basic requirements of the semiconductor for such transistors are: width of the forbidden zone, 2.14 for ZnTe, providing unipolarity of the conductance mechanism; sufficiently high current-carrier movement, of the order of 900 cm²/volt sec; the possibility of varying the conductivity by a change in operation mode (from 10⁻² to 10⁷ ohm cm); they are apparently satisfied by ZnTe. The films are obtained by the process of

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USSR

KORCHKOV, V. P., et al, Radiotekhnika i Elektronika, Vol 15, No 3, 1970, pp 638-639

Abstract:

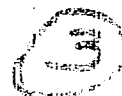
vacuum sputtering. For low electric field voltages, the volt-ampere characteristics of the diodes follow Ohm's Law; for high voltages, the current is approximately equal to the square of the voltage, apparently the consequence of the current being limited by the space charge. The data obtained from experiments with these transistors show that efficient transistors can be made from zinc telluride with injecting contacts.

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USSR

UDC 576.858.25.01(476.9)



SKOFERTSA, P. G., GAYDANOVICH, S. Ya., ONUKIOVA, V. R., KOPCHENKO, N. D.,
YAROVY, P. I., KLISENKO, G. A., and MEL'NIKOVA, Ye. E., Scientific Research
Institute of Hygiene and Epidemiology, Kishinev, Moldavian SSR, and Institute
of Virology imeni D. I. Ivanovskiy, Academy of Medical Sciences USSR, Moscow

"Isolation of Kharagysk Virus From the Kemerovo Group in the Moldavian SSR"

Moscow, Voprosy Virusologii, No 6, 1972, pp 709-711

Abstract: A virus isolated in 1971 from an *Ixodes ricinus* pool collected from sheep in the Moldavian SSR, named Kharagysk by the authors, was lethal to 2-4 day mice and not so to 3-4 week mice. The virus passed through a 100 nanometer pore filter but was retained at 50 nanometers. Sodium deoxycholate and ether had little effect on virus titers. Inasmuch as it was impossible to obtain a hemagglutinating antigen to the virus by usual methods, identification studies were carried out by the complement-fixation reaction. Tests with immune ascitic fluid reactive to several arboviruses were positive only for the Kemerovo group. Moreover, within that group the most pronounced cross-reaction was with the Tribech subgroup. Thus it is demonstrated that Kharagysk virus belongs to the Kemerovo-Tribech group. Apparently *I. ricinus* plays an important carrier role in the infection cycle.

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USSR

UDC 532.612.4

TATARCHENKO, V. A., KORCHUNOV, B. N.

"Effect of an Oxide Film on Capillary Phenomena"

Moscow, Izvestiya Akademii Nauk SSSR: Ser. Fizicheskaya, Vol 37, No 11,
Nov 73, pp 2295-2296

Abstract: Experience in making aluminum articles directly from the melt by the Stepanov method has shown that crystallization of thin-walled stock in vacuum is much more complex than in air. Thin filaments are readily produced in air with a rounding radius on the edges of about 0.1 mm. When filaments of this kind are produced in vacuum, special borders must be used with a rounding radius of about 2 mm. In this paper the authors attempt to explain the reasons for this effect. Since the difference between air and vacuum production of aluminum articles is the dense oxide film on the aluminum melt in air, experiments were done using the Neumann method to determine the influence of this film on capillary phenomena responsible for the formation of the liquid column. The coefficient of surface tension was measured by determining the force required to pull a wetted disc free from the melt surface. It was found that the effective capillary

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TATARCHENKO, V. A., KORCHUNOV, B. N., Izvestiya Akademii Nauk SSSR: Ser. Fizicheskaya, Vol 37, No 11, Nov 73, pp 2295-2296

constant for aluminum covered by an oxide film increases with increasing curvature of the articles being pulled from the surface. From this standpoint the presence of a film is desirable since it compensates for the effect caused by the reduction in the height to which the liquid column is raised as its curvature increases. Intentional creation of a film with properties of this kind on the surface of the melt is one of the methods of controlling capillary phenomena when making aluminum articles directly from the melt. The theory of capillary effects is applicable to aluminum covered by a film when an effective capillary constant is introduced which depends on the diameter of the liquid column.

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UDC 536.46:533.6

USSR

KORCHUNOV, Yu. N., POMERANTSEV, V. V.

"The Combustion Mechanism of Natural Solid Fuels"

V sb. Goreniye i vzryv (Combustion and Explosion -- Collection of Works),
Moscow, "Nauka", 1972, pp 191-194 (from RZh-Mekhanika, No 3, Mar 73,
Abstract No 3B935)

Translation: The foundations of a technique for calculating the combustion processes for natural solid fuels are presented. It is shown that the combustion process should be analyzed on the basis of current ideas concerning the dynamics of the thermal disintegration of the organic mass of the solid. On this basis it is necessary to consider conditions for the formation of volatile-oxidizer mixtures in direct proximity to the fuel particles and as a whole in time as a function of the temperature conditions. Knowing the quantitative and qualitative characteristics of this mixture and the conditions governing their change in time, one can determine the nature of the change in the period for induction of its combustion as a function of time, and on this basis one can determine the time of the initiation of intensive oxidation of the emitted volatile compounds. Conditions for the combustion of particles of peat of dimensions 0.1 and 1.0 mm upon their entry into a medium with constant temperature are discussed as an example. Authors' abstract.

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REEL # 14
KLIMM, V. to
KORCHUNOV, Yu. N.